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Mechanism for Expediting the Deposit,
Transport and Submission of Checks
into the Payment System
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MECHANISM FOR EXPEDITING THE
DEPOSIT, TRANSPORT AND SUBMISSION
OF CHECKS INTO THE PAYMENT SYSTEM

RELATED APPLICATIONS

This is a continuation of co-pending Application for United States Letters Patent Serial No. 08/156,190 filed on November 22, 1993, ^{now abandoned} having the common inventor and assignee of the present invention and incorporated herein by reference for all purposes.

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BACKGROUND OF THE INVENTION

This invention relates to a system for the coordination of the physical transport of financial instruments with the electronic processing of a deposit by the payee of the instrument into a collecting and clearing bank. The instruments are prepared for submission into the check payment system. The deposit and collection of funds represented by the financial instruments is expedited. The financial instruments are checks and other cash items.

In the prior art, the deposit and payment of a check tendered for an amount due is effected in accordance with well established traditional procedures. The drawer (the check writer) establishes a checking account containing funds with a bank. A check is written against the drawer's account in favor of the payee. The payee indorses the check and deposits the check in the payee's account

1 at the bank of first deposit for collection. That bank handling the payee's account and the deposited
2 check presents the check through the check payment system to the drawer's bank for payment. This
3 bank in turn debits funds from the drawer's account, and typically archives the check or a copy of
4 the check and/or returns the physical check to the payor, and the cycle is thus completed. In the
5 sequence of check handling, a check transferee remits, or is responsible for, the funds represented
6 by the check to its transferor if the check is honored by the drawee.

7 The multiple steps in the process and the physical handling of checks involve a period of
8 "float" time for the funds represented by the check. Recent banking regulations have shortened the
9 traditionally permitted times for check processing and collection.

10 The receipt of 10,000 to 1,000,000 or more checks drawn on numerous different banks is not
11 unusual for many large businesses such as credit card issuers, utilities, mail order processors, and
12 other large commercial entities. In situations where large numbers of checks are involved, the
13 handling of individual checks and effecting their posting, deposit and clearing is a complex multiple
14 step process.

15 Thus there exists a need for a system whereby the conventional deposit and collection of
16 funds represented by a check or other financial instrument may be simplified and expedited,
17 particularly for large business institutions such as public utilities, mail order processors, and the like
18 which receive large numbers of checks on a regular basis.

19 It is an object of this invention to provide such an expedited check deposit and collection
20 mechanism and to reduce the amount, complexities and requirements for physical transport of
21 financial instruments. It is a further object to eliminate duplicative data capture steps and multiple
22 handling involved in the payee's and the bank of first deposit's handling of the same instrument.

23 **SUMMARY OF THE INVENTION**

24 The foregoing objectives are achieved in an integrated system for effecting the deposit,
25 settlement and submission of financial instruments into the payment system for collection of funds.

1 The financial instruments received by a payee at a location remote from the payee's collecting and
2 clearing bank are presented for payment to the multiple institutions on which the instruments are
3 drawn. A sorter at a first location established by the payee receives the financial instruments and
4 sorts the instruments according to the predetermined sort pattern categories determined by the
5 payee's collecting and clearing bank. Indorsements on behalf of the payee and the collecting and
6 clearing bank with respect to each instrument received are applied to each instrument by a printer.
7 The sorter further assembles the sorted instruments into discrete groups with respect to the
8 predetermined sort pattern categories and associates one or more cash letters with each assembled
9 group of instruments. A communication link is established between the first location and the
10 collecting and clearing bank which reports to the collecting and clearing bank information in the cash
11 letters in anticipation of a deposit in the payee's account corresponding to the cash letter.

12 The present invention also includes a transport means which delivers groups of instruments
13 and the one or more cash letters from the first location into the check payment system. A central
14 processing unit and communication link predetermines the timing and monitors the transport of the
15 sorted checks. The processing unit also coordinates the checks' deposit with the collecting and
16 clearing bank in a sequence coordinated with the timing of a settlement of accounts in the check
17 payment system. The invention includes alternative embodiments involving a bank of first deposit
18 and a bank of second deposit.

19 These and further objects of the invention will be more readily understood with reference to
20 the following description of the preferred embodiment taken in conjunction with the figures in
21 which:

22 **BRIEF DESCRIPTION OF THE FIGURES**

23 **Figure 1** is a diagram showing the physical transport of checks from the payee into the check
24 payment system, the processing of the checks for collection and deposit, and the ultimate payment

1 from the account of the check writer, as such activities are coordinated by processing means at
2 locations of the check payee and the depository bank.

3 **Figure 2** depicts an alternate system useful in correspondent banking relationships.

4 **DESCRIPTION OF THE PREFERRED EMBODIMENT**

5 In brief a system is provided which structures the processing mechanisms for checks to
6 expedite (1) the processing of checks; (2) the submission of the checks for payment into the check
7 payment system and (3) the deposit of funds represented by the checks into a depositor's account.

8 In the system, a check payee that receives a large number of checks drawn on numerous
9 different banks, will, at the instruction of the payee's depository bank (i.e., its bank of first deposit),
10 upon processing the checks in its own accounting records (such as by recording a payment to a
11 customer's account) sort the checks according to MICR (Magnetic Ink Character Recognition) data,
12 including routing transit number. The sort by MICR data may be in a sort pattern determined by
13 volume in a predetermined geographic area, the financial institution(s) on which the checks were
14 drawn, or the geographic or commercial area of a bank that will otherwise accept a check for clearing
15 and collection.

16 In addition to sorting received checks, the payee indorses the check for its own account, and
17 on behalf of its depository bank, which is the bank of first deposit to which the physical check would
18 be otherwise delivered. An institutional indorsement is conventionally applied as a stamp that prints
19 payment instructions and the identity of the indorser on the reverse side of a check. The bank of first
20 deposit is an agent for its depositor and assumes liability for obtaining payment of the check in
21 subsequent processing.

22 Following sorting and indorsement, the payee then delivers the checks on behalf of the bank
23 of first deposit into the check payment system along with a cash letter in the name of the bank of first
24 deposit, where the checks are cleared and returned to the check writer's bank for ultimate payment

1 against funds in the check writer's account, and the check writer's account is appropriately debited.
2 The "check payment system" includes clearing institutions such as the Federal Reserve Banks,
3 correspondent banks, The National Clearinghouse Association (described in United States Letters
4 Patent No. 5,265,007) and like mechanisms. By reason of its direct relationship to the check
5 payment system, the collecting and clearing bank is a part of the check payment system.
6 In the following two examples, the legend box appearing at the bottom right corners of both Figures
7 1 and 2, indicates that physical transfers are denoted by a solid line and electronic transfers are
8 denoted by a dashed line.

9 EXAMPLE 1

10 The system is illustrated in Figure 1 in which the check payee and bank
11 customer 1 may be a public utility such as a telephone company. In this example, the
12 "bank customer" is a banking client of the bank of first deposit, and is referred to as
13 the "check payee". Typically such a utility will receive from its customers, C1, C2,
14 C3, C4, C5, CN, etc., tens of thousands, if not hundreds of thousands, or millions, of
15 checks per month, drawn on numerous different banks, savings and loans, credit
16 unions or other checking account providers.

17 In the prior art, once the utility processed and indorsed these checks to
18 reconcile its own and its customer's accounts, the utility would physically transport
19 to and deposit the indorsed checks with its depository bank 2 where the utility
20 maintained an account. The depository bank in turn would credit the utility's account
21 for the checks, and the depository bank, being the bank of first deposit, would
22 separately indorse the checks on its own behalf and collect the checks through the
23 check payment system 3, which leads to the ultimate payment of the check from the
24 check writer's account at banks B1, B2, B3 or BN.

25 In that process, the bank of first deposit would physically sort the checks
26 received from and deposited by the utility. Check sorting by MICR codes, the

1 addition of the check amount to the MICR line, and other facets of check processing,
2 including MICR code sorting by routing transit numbers, and the use of sorter
3 machines, are known. The sorted checks would then be delivered in a cash letter
4 (i.e., a listing of checks and the amounts of the checks drawn on a particular
5 institution or group of institutions from a particular area) into the check payment
6 system where settlements with other financial institutions on which the checks were
7 drawn would be effected. Such a settlement involves the physical transport and
8 exchange of the checks, and a calculation of aggregate amounts owing and payable
9 by participants in either a bi-lateral or multi-lateral settlement at a predetermined
10 time. After settlement, the check payor's bank would physically have custody of the
11 check and would conventionally process the check for its customer's account.

12 In contrast, the present system provides that the utility, in its own processing
13 of the checks, at a site distant from the location of the depository bank, indorses the
14 check for payment (1) on its own behalf and (2) on behalf of the bank of first deposit
15 where the utility or check payee 1 maintains an account and deposits the check. In
16 its processing of the checks, the utility adds the check amount to the MICR line.

17 In the next step, the indorsed checks are sorted by the utility or check payee
18 in accordance with predetermined sort pattern categories selected by the depository
19 institution; and, the utility prepares a cash letter in the name of the depository bank
20 for each group of checks within the predetermined sort category. The sort may be
21 by individual bank, geographic location, clearinghouse affiliation or other criteria
22 determined by the depository bank.

23 Upon the sorting and preparation of the cash letter, the utility or check payee
24 1 transmits, between the utility's CPU (Central Processing Unit) 13 and the
25 depository bank's CPU 14, check MICR line information to the depository bank 2
26, and the bank thus has information for crediting the utility's deposit account for the
27 funds represented by the checks and for other banking purposes with respect to the

1 utility's account. The utility, or check payee 1, however, in lieu of actually
2 transporting the physical checks to the depository bank 2 to make the deposit, as
3 illustrated in Figure 1 by the solid line with the word "Possible" contiguous thereto,
4 transports the doubly indorsed checks, and accompanying cash letters, for submission
5 directly into the check payment system. The direct submission of the doubly
6 indorsed checks into the check payment system is depicted by the lines connecting
7 payee 1 and check payment system 3 bearing the legend "Category Sorted Checks
8 and Cash Letters".

9
10 With reference to the Example, it is evident that improvements in efficiency and time, and
11 a reduction in paper handling is achieved by the system, compared with the instances of physical
12 handling and duplication in the prior art process. The conventional step of delivering the physical
13 items to the bank of first deposit is eliminated; the two indorsements of the check are applied at the
14 same time, instead of twice at the different locations of the payee and the bank of first deposit. The
15 faster availability of funds to all payees in the clearing sequence is achieved. It is necessary,
16 however, that the timing of steps in the present system be synchronized and coordinated between
17 the depositor, the bank and the check payment system with respect to the indorsing and sorting of
18 checks, the transmission of check MICR information, the submission of doubly indorsed checks into
19 the payment system, and the deposit, collection and verification of funds represented by the checks.

20 EXAMPLE 2

21 An alternative utilization of the invention is shown in Figure 2, where a
22 collecting and clearing bank 10 is a provider of check processing services to other
23 correspondent banks or financial institutions, correspondent Bank #1, correspondent

1 Institution #2, etc. Here, however, correspondent Bank #1 and correspondent
2 Institution #2 receive, as the institutions of first deposit, checks received from their
3 customers P1, P2, P3, PN, the payees of checks written by check writers/drawers C1,
4 C2, C3, C4, C5, CN. Bank 10 is a bank of subsequent deposit that further submits
5 the checks received from the correspondent banks and institutions into the check
6 payment system for collection and clearing. This example is an illustration of the
7 present invention whereby multiple smaller institutions
8 that do not process the volume of instruments as a check payee 1, such as in Example 1, or
9 larger institutions that typically outsource certain functions, may achieve the advantages of
10 the invention through their utilization of a bank of second deposit, collecting and clearing
11 bank 10.

12 At a location 17 remote from collecting and clearing bank 10, the checks from
13 the customers of correspondent Bank #1, correspondent Institution #2, etc. are
14 indorsed respectively in the names of correspondent Bank #1, correspondent
15 Institution #2, etc. by indorser 11, on their own behalf as the bank or institution of
16 first deposit. An indorsement is also applied to the checks by the indorser on behalf
17 of bank of second deposit 10. The check amount is added to the MICR line. (The
18 addition of check amount and indorsement information to the check are known
19 elements of the check processing routine). CPUs 15 and 16 associated with
20 correspondent Bank #1 and correspondent Institution #2 respectively, provide a
21 communication link with the remote location whereby check and settlement
22 information available to the sorter of the bank of second deposit is exchanged. At the
23 remote location, the indorsed checks are commingled and sorted by sorter 12 in
24 accordance with predetermined sort pattern categories determined by bank of second
25 deposit 10 and a cash letter is prepared in the name of bank 10 for each group of
26 checks within the predetermined sort category. Information about the checks is
27 transmitted from the indorsement and sorting site to bank 10 via CPUs 13 and 14

1 respectively, for use in bank 10's recording of the deposit of the checks in the
2 respective accounts of correspondent Bank #1, correspondent Institution #2, etc. ,
3 maintained at bank 10.

4 From the sorter site, the cash letter is delivered directly into the check
5 payment system. Although the bank 10 is the collecting and clearing bank for the
6 checks of Bank #1, Institution #2, etc. , the physical checks are not handled by bank
7 10. Instead, the check deposits, clearings and collections are monitored by electronic
8 communication links and CPUs 13 and 14 at the locations of the indorsement applier
9 11 and sorter 12 and collecting and clearing bank 10.

10 The preparation of the cash letters for the sorted checks that are delivered
11 from the sorter directly into the check payment system is in accordance with sort
12 pattern criteria determined by the bank of subsequent deposit for collecting and
13 clearing.

14

15 Thus, the controlled system described herein accelerates the check collection process by eliminating
16 the need for, and the time consumed by, the physical transport of checks to the depository bank and
17 the subsequent physical transport of the checks and submission of checks into the check payment
18 system by the depository, or collecting and clearing bank. In the first example, dual sorting and dual
19 capture of information by both the payee and a bank of first deposit is eliminated. Likewise, the
20 need for repetitive sorting of the same instrument by both the payee bank and the bank of first
21 deposit is also eliminated when the collecting and clearing bank is a bank of second, or subsequent,
22 deposit. The inter-relationship of the depository bank, or the collecting and clearing bank, with the
23 sorter and indorsement applier is effected by electronic communications and a control system of
24 processing computers at one or each of the bank and the sorter. The CPU at that location transmits
25 MICR line data to the collecting and clearing bank. The cash letters for the sorted checks on behalf

1 of the collecting and clearing bank are prepared at the remote customer's or sorter's location.
2 Physical items that formerly required double handling, first by the customer/depositor and then by
3 the collecting and clearing bank are now singly handled at the point of indorsement and sorting.
4 Check handling and preparation for submission to the payment system are thus integrated.

5 As handling is reduced, redundancy is eliminated, cost is reduced and error caused by the
6 transfer and handling of numerous checks are also reduced. The checks are forwarded to
7 predetermined sort pattern categories in the check payment system according to the sort patterns
8 established by the collecting and clearing bank. Hence, with reference to Example 1 and the local
9 utility, most of the checks received by the utility would likely be drawn on banks in the utility
10 service area, and the clearing of the checks would be effected through the local check payment
11 system. The collecting and clearing bank, in a location other than that of the utility, maintains an
12 electronic link for settlement purposes for participation in that local check payment system.

13 By contrast, the payee in Example 1 and the indorsement/sort service provider in Example
14 2 also become the archive on behalf of the collecting and clearing bank for the received checks, as
15 well as for itself, whereby each check received by the payee is microfilmed or imaged and assigned
16 a document identification number. In Example 2, the sorter may also be the archive for Bank #1,
17 Institution #2, etc., that are serviced by the collecting and clearing bank.

18 Thus, the invention provides a system for effecting the deposit, settlement and submission
19 for collection of funds represented by financial instruments that are received by a payee at a location
20 remote from the payee's depository bank. The instruments are presented for payment to multiple
21 institutions in the check payment system.

22 A sorter, which is a well known machine in the banking industry, is placed at a first location
23 established by the payee. The sorter receives the tangible financial instruments in high volume from
24 the payee's customers. The sorter sorts the instruments according to predetermined sort pattern
25 categories determined by the depository bank. Indorsements of the instruments on behalf of the
26 payee and the depository bank with respect to each check received are applied by a printer or
27 stamping mechanism before, during or after the sort process. The sorter will generally assemble the

1 sorted instruments into discrete groups with respect to the predetermined sort pattern categories. A
2 cash letter associated with each assembled group of sorted instruments is prepared by the payee on
3 behalf of the depository bank.

4 A communication link between the payee location and the depository bank enables the payee
5 to report to the bank the information about the checks in the cash letters and permits the bank, upon
6 receipt of the information to anticipate in the bank a deposit in the payee's account corresponding
7 to the cash letter(s). When the bank receives confirmation that it has received credit for the cash
8 letter through the check payment system, it makes the funds available to the payee.

9 These physical means are coordinated by a central processing unit and communication links
10 between the parties involved in the check payment process. In this manner the timing of the physical
11 transport of the instruments for submission into the check payment system is controlled and the
12 delivery of the sorted checks into the check payment system is confirmed and verified. The
13 recording of the checks as a deposit in the payee's account with the depository bank, or the collecting
14 and clearing bank, is thus coordinated with the timing of the issue of a credit to the bank when a
15 settlement of the accounts represented by the checks is received through the check payment system.

16 The transport of the groups of instruments and the associated cash letters from the first
17 location to a payment system endpoint is effected by conventional ground or air delivery.

18 Given the foregoing disclosure, it is evident that the benefits of the expedited clearing and
19 settlement system described herein may be extended and adapted to numerous types of commercial
20 activities in which a volume of checks is received.

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